REVISIONS TO THE ET FIRE SPRINKLERS (EDITORIAL)

R309.5 Fire sprinklers *location on property*. Private garages shall be protected by fire sprinklers where the garage wall has been designed based on Table R302.1(2), Footnote a. Sprinklers in garages shall be connected to an automatic sprinkler system that complies with Section ~~P290~~ *R313*. Garage sprinklers shall be residential sprinklers or quick-response sprinklers, designed to provide a density of 0.05 gpm/ft2. Garage doors shall not be considered obstructions with respect to sprinkler placement.

R309.6 Fire sprinklers. ~~*Carports with habitable space above and attached garages shall be protected by residential fire sprinkler system in accordance with this section. Residential fire sprinklers shall be connected to, and installed in accordance with, a fire sprinkler system that complies with Section R313 or NFPA 13D. Fire sprinklers shall be residential sprinklers or quick-response sprinklers, designed to provide a minimum density of 0.05 gpm/ft2 (2.04 mm/min) over the area of the garage and/or carport, but not to exceed two sprinklers for hydraulic calculation purposes. Garage doors shall not be considered obstructions with respect to sprinkler placement.*~~

~~***Exception:*** *An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing carports and/or garages that do not have an automatic residential fire sprinkler system installed in accordance with this section.*~~

R309.6 Fire Sprinklers Attached garages, and carports with habitable space above. *Attached garages, and carports with habitable space above shall be protected by fire sprinklers in accordance with this Section and Section R313. Protection shall be provided in accordance with one of the following:*

1. Residential Sprinklers installed in accordance with their listing.
2. Extended Coverage sprinklers discharging water not less than their listed flow rate for Light Hazard in accordance with NFPA 13.
3. Quick-Response spray sprinklers at light hazard spacing in accordance with NFPA 13 designed to discharge at 0.05 gpm/ft2 density (minimum).

The system demand shall be permitted to be limited to the number of sprinklers in the compartment but shall not exceed two sprinklers for hydraulic calculation purposes. Garage doors shall not be considered obstructions and shall be permitted to be ignored for placement and calculation of sprinklers.

Exception: *An automatic residential fire sprinkler system shall not be required when additions or alterations are made to existing carports and/or garages that do not have an automatic residential fire sprinkler system installed in accordance with this Section.*

~~**P2902.5.4**~~ ***R313.3.5.3 Connections to automatic fire sprinkler systems.*** *The potable water supply to automatic fire sprinkler shall be protected against backflow by a double check backflow prevention assembly, a double check fire protection backflow prevention assembly, a reduced pressure principle backflow prevention assembly or a reduced pressure principle fire protection backflow prevention assembly.*

Exception: *Where systems are installed as a portion of the water distribution system in accordance with the requirements of this code and are not provided with a fire department connection, backflow protection for the water supply system shall not be required.*

~~**P2902.5.4.1**~~ ***R313.3.5.3.1 Additives or nonpotable source.*** *Where systems contain chemical additives or antifreeze, or where systems are connected to a nonpotable secondary water supply, the potable water supply shall be protected against backflow by a reduced pressure principle backflow prevention assembly or a reduced pressure principle fire protection backflow prevention assembly. Where chemical additives or antifreeze is added to only a portion of an automatic fire sprinkler or standpipe system, the reduced pressure principle fire protection backflow preventer shall be permitted to be located so as to isolate that portion of the system.*

REVISIONS TO THE ISOR ET FIRE SPRINKLERS (EDITORIAL)

R309.6
The SFM is proposing to reformat and provide additional clarity regarding the provision for garage fire sprinkler provisions. The current text used in the section could be read to be contradictory and imprecise, and may result in inappropriate interpretation by contractors and the review authorities. In particular, the first and second sentences of the section require the use of residential fire sprinklers (a defined term and specific UL Listing), whereas the third sentence permits the use of residential sprinklers or quick-response sprinklers (a separate defined term and UL

Listing) for protection of the garage or carport. Additionally, the hydraulic design criteria requires a density of 0.05 gpm/ft2 over the area of the garage and/or carport, but not to exceed two sprinklers. This Section also does not address the use of "extended coverage sprinklers" and additional modification is provided to afford for such. These modifications also provide additional correlation of garage fire sprinkler requirements that are located in NFPA 13R.

R313.3.5.3
The SFM is relocating provisions contained in the International Residential Code relating to backflow prevention for automatic fire sprinkler systems. The provisions are being relocated to the new CRC Section R313.3.5.3 due to the non-adoption of chapter 29. Furthermore, these provisions are not contained in the California Plumbing Code and are specifically related to the International Residential Code provisions for automatic fire sprinkler systems contained in Section P2904 and relocated to Section R313.3 for the California Residential Code.

REVISIONS TO THE ET REGARDING SMOKE ALARMS

R314.3.2 Smoke alarms. *Smoke alarms shall be tested and maintained in accordance with the manufacturer's instructions. Smoke alarms that no longer function shall be replaced. Smoke alarms installed in one- and two-family dwellings shall be replaced after 10 years from the date of manufacture marked on the unit, or if the date of manufacture cannot be determined.*

R314.3.3 Conventional ionization smoke alarms. *Conventional ionization smoke alarms that are solely battery powered shall be of the equipped with a ten year battery and have a silence feature.*

R314.3.6 Specific location requirements.
Extract from NFPA 72 Section 29.8.3.4 Specific Location Requirements.*
This extract has been provided by NFPA as amended by the Office of the State Fire Marshal and adopted by reference as follows:

REVISIONS TO THE ISOR REGARDING SMOKE ALARMS

R314.3
R314.3.6
The SFM is proposing amendment to incorporate specific location provisions contained in NFPA 72 for the placement of smoke alarms. This proposal is primarily based on recommendation from the SFM Smoke Alarm Task Force Recommendations for Regulation and Legislation. The following are excerpts from the Final Report:

Executive Summary
On January 13, 2011, CAL FIRE - Office of the State Fire Marshal convened representatives from various disciplines related to smoke alarms to form the Smoke Alarm Task Force. Their purpose was to address the understanding, utilization, and effectiveness of smoke detection technology including ionization and photoelectric, and other technologies, complying with current California State Fire Marshal listing standards, and used in residential occupancies as required by California regulations. The final Analysis and Recommendation Report to the California State Fire Marshal documents the understanding and utilization of smoke alarm technology through the review and examination of current/relevant studies, reports, and/or scientific data.

Scope
The scope of the Office of the State Fire Marshal (OSFM), Smoke Alarm Task Force (SATF) project was to address the effectiveness of smoke detection technology including, but not limited to ionization and photoelectric, complying with current California State Fire Marshal (CSFM) listing standards, and used in residential occupancies as required by California statute and regulations. The task force was to review and examine current or relevant studies, reports, and scientific data (see Appendix C); and provide recommendations to the CSFM.

Recommendations
In order to address concerns wherein occupants are more likely to be able to successfully escape in the event of a fire - the task force submits the recommendations below to be considered. While they capture the intent of the task force, we recognize that ultimate execution of each may require changes in regulations, codes, standards, and even legislation. As a result, it is expected additional work will be needed to develop enforceable language and precise definitions of terms.

1. The 2010 NFPA 72 requirements for smoke alarm placement in section 29.8.3.4(4) should be adopted directly into California Regulations by transcription. This should reduce the number of nuisance alarms produced due to the location of smoke alarms in proximity to cooking appliances and bathrooms. By transcribing the requirements directly into regulations it also allows building and fire officials who do not have access to a copy of NFPA 72 to better understand where smoke alarms should not be installed.

3. Regulations should be developed to minimize unwanted alarms that prohibit the installation of a smoke alarm with conventional ionization technology within 20 feet of a fixed cooking appliance. The effective date of such regulations should be within the next feasible rule making cycle.

For further information or to review the full report, visit osfm.fire.ca.gov/SFM_SATF_Rpt.pdf

Additional modification to NFPA Section 29.8.3.4 is proposed to revise items (4) and (5). This proposal is intended to reduce nuisance alarms attributed to locating smoke alarms in close proximity to cooking appliances and bathrooms in which steam is produced. The proposed provisions are based on the findings in the Task Group Report - Minimum Performance Requirements for Smoke Alarm Detection Technology - February 22, 2008, and are consistent with similar requirements included in the 2010 edition of NFPA 72.

Section R314.2 already requires smoke alarms to be installed in accordance with NFPA 72, which theoretically describes where alarms should and should not be installed. As a convenience to the code user, requirements on where smoke alarms should not be installed in proximity to permanently installed cooking appliances and steam producing bathrooms will be included in this section.

This proposal (R314.3.2) clarifies the requirements in Section 901.4 of the CFC for testing and maintaining smoke alarms, and specifies when the devices need to be replaced. The proposed requirements are consistent with NFPA 72 provisions. In particular NFPA 72 requires smoke alarms installed in one- and two-family dwellings to not remain in service longer than 10 years from the date of manufacture, and UL 217 requires the date of manufacture to be marked on the smoke alarms.

It is recognized that it may not always be practical for the code official to enforce the requirements for testing, maintenance and replacement of smoke alarms in residential dwelling units. However realtors and landlords often have checklists that verify that these dwellings comply with codes and other requirements, and they may be in a position to verify compliance with the proposed provisions when the units are sold or leased.

(R314.3.3) Battery operated smoke alarms currently are not required to have a long life battery which increase the likelihood of the occupant removing the battery or not replacing it twice a year. The activation of a smoke alarm with a reliable batter power will allow timely, accurate notification to the occupants allowing sufficient time for evacuation of the residence in house.